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WAR FOOD ADMINISTRATION  
Office of Distribution  
Washington 25, D.C.

February 8, 1944

MEMORANDUM

To: Egg Graders

From: Henry G. F. Hamann, Chief, Inspection and Grading Division, Dairy and Poultry Branch

Subject: Mechanics of Shell Egg Grading

1. Required Facilities

- A. The candling room should be dark with no cross beams of light between the grader and the candling light. By "dark" is meant a room darkened to the extent that a person entering the room from bright daylight would be temporarily blinded. The cross beams of light to be avoided are those which are due to improperly closed curtains, windows, cracks in the partitions or unshielded candling or nailing bench lights.
- B. The candling light should be one of approved construction. If a non-reflector type is used, the bulb should be a 40 to 60 Watt. If a reflector of the auto head light type is used, the bulb should be of no greater than 10 Wattage and no greater than 25 Watts if household type bulb. The opening to which the egg is placed for examination should be no larger than a 25¢ piece. The opening at the bottom of the light should be no larger than necessary to permit sufficient light to escape to enable the detecting of dirty eggs, and the observation of packing material. The lights should be adjusted so that the candling light is approximately on the same level as the grader's elbows.
- C. Two scales should be available whenever a grading is made. The individual egg scale should be of a type which will indicate the individual weights necessary to classify eggs according to Consumer or Wholesale Grades. The second scale necessary is one used to obtain the net weight of the case. When an inspection basket is used the spring type scale may be used. When no inspection basket is available, a platform scale may be used, provided it is graduated in one-quarter pounds. The scales should be checked for balance and accuracy prior to each grading.
- D. The grader should provide himself with an official grade and lot stamp prior to performing any grading work.

II The Identification and Examination of Lot Prior to Grading

- A. The cases in the lot, except when eggs are stored in a public warehouse, should be counted prior to drawing the sample. The number
- NOV 7 1944

of cases should be noted on the memorandum. The count should be verified at the time the cases are stamped with the grade or lot number.

- B. The cases should be examined and their condition noted as to the following conditions: New, good used, poor used, (note) New cases should show no evidence of previous use. Good used cases should be reasonably clean, have sufficient rigidity to protect the eggs in normal handling and full covers which may consist of one or more pieces. Fibre or corrugated cases must be dry and have covers fastened securely. The term "Poor used cases", should be applied to describe cases not conforming to new or good used.
- C. The marks and identification which are on the cases, should be noted on the memorandum. The marks to be noted are lot numbers (USDA, storage or firm), brand name, and packers name and address and Food and Drug Administration's requirements as to marking, must be met.
- D. The temperature of the holding room or car should be obtained and noted on the memorandum. Knowing the approximate temperature of the eggs at time of grading is important to enable a grader to grade properly, and noting these temperature figures (holding room & egg) protects the grader in the event the lot may be off grade when checked at a later date.
- E. It is desirable to note on the certificate, the temperature of the eggs in addition to the holding room temperature, whenever the eggs are warmer than 55°F. This temperature should be obtained from a minimum of three cases in each lot. Since it is necessary to remove the lid to enable placing the thermometer in the center of the case, it is suggested that the temperature be obtained from the sample cases. The thermometer should be inserted between the center portion and the fillers.

### III The Drawing of Sample

- A. In a public warehouse, the sample may be drawn by employees of the warehouse. Graders should point out to warehouse employees that sample should be selected from various parts of the lot.
- B. In the dealer's store, the sample must be drawn by the grader. Samples should be numbered and initialed by the grader in such a manner that if one or more cases show definitely poorer quality, additional samples can be drawn from the same general part of pile before final grade is given. Samples must be drawn proportionately from various parts of the lot. In a 600 case railroad car, it is necessary to remove 100 to 150 cases to do a satisfactory job. When these are removed, the samples should be drawn from various parts of the remainder of the car. A portion of the sample should also be drawn from the cases removed. In a 400 or 480 case car, one sample case should be drawn out of each row and each layer, up to the total number of cases desired.



#### IV Size of Sample

A. The following schedule is the minimum of samples to be drawn from the lots of the size indicated:

When size of lot is:	Minimum samples drawn shall be not less than:
2 cases	2 cases
3 " to 15 cases . . . . .	3 "
16 " to 25 " . . . . .	4 "
26 " to 60 " . . . . .	5 "
51 " to 100 " . . . . .	7 "
101 " to 200 " . . . . .	10 "
201 " to 350 " . . . . .	12 "
351 " to 500 " . . . . .	15 "
500 " to 600 " . . . . .	15 on Wholesale, 20 on Consumer and Procurement
Each additional 100 cases . . . . .	3 cases

When lots are running uniform as judged by the examination of the samples selected, such sample will be sufficient to classify the lot into Consumer, Procurement or Wholesale grades. When the lot examined is irregular, two to five additional cases should be drawn from the same general location from which the poor case or cases were drawn prior to placing into a Consumer or Procurement classification. A lot is considered irregular when the percentage of top grade eggs in any one case falls more than 20 percent below the minimum average required in the grade which would be assigned on the basis of the cases already examined. E.G.:— A lot would not be graded as Consumer A or Procurement I, if one or more cases contains only 59 percent A's, as it varies more than 20 percent from the required minimum average of 80% A's

#### V. Grading

A. The cases should be placed directly under the candling light so that sufficient light will shine into the end of the case being examined, to properly observe shell condition and packing material. 100 eggs should be examined out of each case. The following system should be used in selecting the 100 eggs for examination:

Examine the 3 top fillers in the first case except 8 eggs in 3rd filler  
 The second, third and fourth in the 2nd. case " " " " "  
 The third, fourth and fifth in the fifth case " " " " "  
 The first, second and fifth in the third case " " " " "  
 The first, fourth and fifth in the fourth case " " " " "

This order should be repeated until all the cases are examined. By examining 100 eggs you will have eight surplus eggs in each third filler examined. The number ungraded should be left in the same corner of the flat each time. This is desired to eliminate any possible argument as to whether dirty eggs are chex in the third filler are to be accepted for grading as part of the sample or are purposely not graded.

- B. When the filler is removed, the grader should note first the condition of the packing material; second, note the number of eggs that are packed, small end up; third, select the dirties for grading; and fourth, select any eggs showing noticeable size variation for grading. In examining the eggs, the majority of graders note the quality factors in the following order: dirt, aircell, yolk position, internal foreign particles, yolk movement, blemishes, soundness of shell, and last, the size of the eggs.
- C. As each handful of eggs are graded, the eggs of each grade should be placed in separate fillers or if the lot of eggs is uniform, the tolerance may be placed in one filler properly segregated as to grade.
- D. Upon completion of the grading of each 100 eggs, the findings should be recorded on the memorandum as to external and internal qualities. Be sure to check your figures to make certain the figures recorded, total 100. After this recording is made, graders should record the number of eggs per 100, which fall below the required individual egg minimum weight.
- E. As an additional means of identification, it is well to indicate whether the eggs are white, brown or mixed colors, and whether they are natural or shell treated. When all cases have been graded and net weighed, the grader should tally his memo and cross total to check for accuracy.

#### VI. Weighing

- A. The net weights should be obtained by weighing all the fillers, flats and eggs from the end of the case which was examined. Multiply the weight obtained by two and subtract  $3\frac{1}{2}$  lbs. The resultant figure is the net weight of the eggs in the case. The scale should at all times be read by the grader personally.
- B. At time of weighing, observe the condition of the packing material and record the findings on the following bases: new, good used, poor used. (Note) new flats and fillers shall be clean and should show no evidence of previous use. Good used fillers and flats should be reasonably clean and should be sound enough to enable grader to lift the three dozen from the case without losing eggs from broken fillers or torn flats. Poor used fillers and flats should be used to describe packing material not conforming to new or good used. It is desirable to occasionally smell the half case being examined to determine presence of any undesirable odors.
- C. It is very important to differentiate between good used and poor used and to note same on memorandum.

#### VII Assigning grade

- A. The grade assigned to any lot shall be the highest grade that can be given. The grade assigned should reflect a true picture of the lot, based on the findings of the inspection.



- B. The three grade classifications are graduated in the following order: Consumer, highest, followed by Procurement, and last Wholesale. These grade classifications may be further graduated by considering Consumer A, and Procurement I equal; and considering Procurement II, III, and IV better than Consumer B.
- C. To assign the grade, total and average the figures obtained in the inspection. Second, note whether the lot contains any loss. If it does it can only be considered as of a wholesale classification. If no loss is present, attempt to place the lot in a consumer or procurement grade, whichever is the highest, based on the graduation indicated above.
- D. If the average percent of AA's is 80% it may be considered for Grade AA Consumer classification. If the average percent of AA and A's combined total 80%, it may be considered for Grade A, Consumer classification or Procurement I. If the average percent of AA and A's combined total 60 - 40 or 20%, the lot may be considered for Procurement II, III or IV. If the average percent of Grades AA, A and B's combined total 80%, the lot may be considered for B Consumer classification. If it fails to meet these minimum requirements, it can only be considered for Grade C, Consumer classification, or one of the Wholesale grades.
- E. Place the lot into the highest grade for which it may be considered, provided the percentage of undergrade eggs does not exceed the permitted tolerance. If the percentage of under grades exceeds the tolerance, it is necessary to lower the grade assigned to the highest grade in which the percentage of undergrades does not exceed the tolerance.
- F. Whenever the lot falls into a Consumer classification, it is also necessary to assign a weight classification based on the chart of tentative U. S. weight classes for Consumer grades for shell eggs. The weight classification of Procurement grades is based on the contract under which the lot is sold.. In assigning Procurement grades, not more than 3.3 percent (lot average) of the individual eggs may weigh less than the specified minimum for individual eggs as stated in the contract.
- G. A lot of eggs is assigned a Wholesale grade whenever the lot contains loss; is irregular in quality or size; contains an excessive amount of dirties, chex; or fails to meet the requirements of a Consumer or Procurement classification.
- H. Since loss is a factor which can not be compensated, the first step in assigning a grade is to compare the loss on the memorandum with the chart for Wholesale grades. Next, compare the percentage of top grade eggs with the required minimum percentage. The lot is placed tentatively into the highest grade permitted, based on the percentage of top grade eggs, provided the loss is not excessive. If the loss is excessive, the grade assigned must necessarily be lowered to agree with the loss. The third item in the determination of the correct Wholesale grade is the amount of under grades or tolerance.

If the combined total of tolerance and loss in the lot in question does not exceed the amount allowed in the Wholesale chart, the grade assigned remains unchanged. If the total exceeds the tolerance and loss on the chart, the grade must be lowered to a grade so that the total loss and tolerance does not exceed the amount permitted for that grade. In no instance may the loss in the lot in question exceed the loss indicated on the chart for the final grade assigned.

- I. In Wholesale grades the quality of the egg and weight, both affect the final grade. As such, the grade assigned in the three steps indicated above will not be the final grade whenever the weight of the individual cases or average for the lot is less than that which is permitted for that grade as specified in the weight requirements of the Wholesale grades.
- J. No individual case may weigh less than the required average weight, as indicated in the chart.
- K. A lot of eggs must also meet the required individual egg weight in addition to meeting the requirements of average and minimum case weights. In Consumer Grades, not more than 5 percent (lot average) of the individual eggs may fall into the next lower weight classification. In wholesale grades the percentage of under weight eggs permitted for any given grade is indicated in the Wholesale chart.

#### VIII Identifying the Lot with the Official Grade Stamp

The lot number must be the entire covering certificate number.

- A. When examined in a railroad car on Team Track:
  - 1. If of a Consumer or Procurement classification, double stamp the sample cases on the end examined with U.S.D.A. lot and grade.
  - 2. When of a Wholesale classification, double stamp only the sample cases with U.S.D.A. lot number.
- B. When examined in public warehouse and each case is stamped or tagged with a storage lot number:
  - 1. Same as A, sub 1 and 2, above.
- C. When examined by a resident grader:
  - 1. If of a Consumer or Procurement classification, single stamp all cases in the lot with grade and lot number (grade and Lot stamp may be combined). Double stamp the end of the cases examined.
  - 2. If of a Wholesale grade, stamp only with U.S.D.A. lot number unless a Wholesale grade stamp is available, indicating exact grade and size classification.



D. When examined by fee grader in a dealer's store or on private siding:

1. Stamp as C above, sub 1 and 2.

E. Eggs sold under purchase announcement should be stamped in accordance with special instructions issued under such announcement.

IX Preparation of Memorandums

- A. The official egg grader's memorandum shall be executed in detail at time of grading. All grading certificates shall be "backed up" with a detailed memorandum which should be kept on file.

*Henry G. Hermann*



WAR FOOD ADMINISTRATION  
Office of Distribution  
Washington 25, D. C.

April 22, 1944

SUPPLEMENTAL I  
TO  
MECHANICS OF SHELL EGG GRADING  
(Good Used Egg Cases)

To: Egg Graders

From: Henry G. F. Hamann, Chief, Inspection and Grading Division, Dairy  
and Poultry Branch

Subject: Definition of "Good Used" Egg Cases

Good used egg case as defined in the 'Mechanics of Shell Egg Grading' is as follows: "Good used cases should be reasonably clean, have sufficient rigidity to protect the eggs in normal handling and full covers which may consist of one or more pieces. Fibre or corrugated cases must be dry and have covers fastened securely."

Good Used Wood Cases

Reasonably clean is defined to mean a case which is not "weather beaten" (browned) or badly stained.

Sufficient rigidity is defined to mean a case whose sides and bottoms are nailed to the ends and center securely; must have full cleats and center. Nailed securely means 21 nails in each bottom, 18 in each side, and 8 nails in the top. Nails should hold firmly and not be loosened by wear or holding in storage. Bottoms, sides, and ends should not be patched other than an entire new side, end, or bottom, or if more than one piece construction, the replacement piece shall be of standard size and shape.

Full tops is defined to mean that the entire top is covered. Top may be of more than one piece if such pieces are of standard size and shape.

Good Used Fibreboard Egg Case

Reasonably clean is defined to mean reasonably bright and free from excessive stains.

Sufficient rigidity is defined to mean as follows: No case which has lost its original shape due to warping, bulging, sagging, or indentation can be considered as good used. All seams must be securely fastened with no broken stitches or pulled staples. Hand slots or any other part of the case may not be torn. Any fibre case which is wet or shows evidence of having been wet or excessively damp (such as having been held in storage as evidenced by stains or sagging) shall be considered as poor used. In general, a good used fibre egg case must have the appearance of a "once used" case.

Covers shall be either locked automatically over the ends or in the center, or be fastened by taping. When covers on used cases are not automatically locked or are not taped, cases shall be considered poor used.





WAR FOOD ADMINISTRATION  
OFFICE OF DISTRIBUTION  
Washington 25, D. C.

June 10, 1944

SUPPLEMENT II TO MECHANICS OF SHELL EGG GRADING

To: Egg Graders

From: Henry G. F. Hamann, Chief, Inspection and Grading Division,  
Dairy and Poultry Branch

Subject: Condition Inspection of Shell Eggs

The following information is desired when making condition inspections of shell eggs:

1. Number of cases badly damaged.
2. Percentages of loss in badly damaged cases.
3. Number of leakers and dented checks in top fillers of each end of 20 undamaged cases to determine concealed damage. To be reported separately for each case.
4. General condition of cases and packing material. State whether cases fibre or wood.
5. A properly qualified statement reporting the shift, if any, and type of bracing used. If this information is not obtained first hand, it is necessary to state from whom information was obtained.
6. Number of frozen eggs, if any.
7. Amount of ice in car. State in terms of full, half, quarter, etc.
8. Accompany certificate with recommendation for rehandling or disposition if applicant is a Federal agency.
9. Any other comments which aid in describing the condition of the eggs and packaging material. No grading report is required, however, a covering certificate giving the above information shall be issued.

*Henry G. F. Hamann*





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WAR FOOD ADMINISTRATION  
Office of Marketing Services  
Washington 25, D. C.

January 1, 1945

MEMORANDUM

To: Egg Graders

From: B. W. Kempers, Inspection and Grading Division, Dairy and Poultry Branch

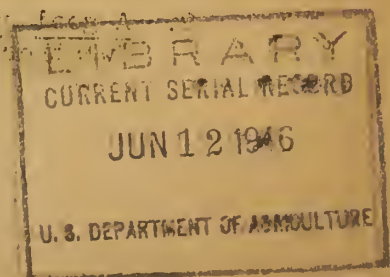
Subject: Mechanics of Shell Egg Grading - Destroy all earlier editions

I. Required Facilities

- A. The candling room shall be dark with no cross beams of light between the grader and the candling light. By "dark" is meant a room darkened to the extent that a person entering the room from bright daylight would be temporarily blinded. The cross beams of light to be avoided are those which are due to improperly closed curtains, windows, cracks in the partitions, or unshielded candling or nailing bench lights.
- B. The candling light should be one of approved construction:
1. If a non-reflector type is used, the bulb should be a 40 to 60 Watt.
  2. If a reflector of the auto head type is used, the bulb should be of no greater than 10 Wattage and no greater than 25 Watts if household bulb.
  3. The opening to which the egg is placed for examination should be no larger than a 25¢ piece.
  4. The opening at the bottom of the light should be no larger than necessary to permit sufficient light to escape to enable the detecting of dirty eggs, and the observation of packing materials.
  5. The lights should be adjusted so that the candling light is approximately on the same level as the grader's elbows.
  6. The interior of candling lights should be kept clear and free from dust to assure maximum light efficiency.

C. Scales required

1. Individual egg scales should be used when making official inspections. These scales must be checked for accuracy at frequent intervals and kept in a level position when being used. Test weights should be available.



2. Platform or spring scale

- (a) Shall be balanced prior to each inspection or grading.
- (b) Should be graduated in 1/4 lb. graduations.
- (c) It is preferred to have each grader carry his own scale and weighing basket.

D. The grader should provide himself with an official grade and lot stamp, as well as official Grading Memoranda, prior to performing any grading work.

II. The Identification and Counting of Cases in Lot Prior to Grading

A. Marks and identifications which are on the cases shall be noted on the memorandum.

The marks to be noted are:

- 1. Lot numbers (USDA, Storage, or firm)
- 2. Brand
- 3. Name and address of packer or distributor
- 4. Any other marks relating to contents of eggs

B. Food and Drug Administration's requirements as to marking must be met or no grading shall be made, except when product will not be delivered to a Federal agency or will not be shipped across state lines. These requirements are description of contents (such as 30 dozen shell eggs); name and address of packer or distributor. Old labels and markings should be properly defaced.

C. Counting the cases - the cases in the lot, except when eggs are stored in a public warehouse, should be counted prior to drawing the sample. The total number of cases should be noted on the memorandum. The count should be verified at the time the cases are stamped with the grade or lot number.

III. Cases and Packing Material

A. Cases - Examine and note on memorandum as to whether they are wood, fiberboard, or both (if both, show actual number of each). Also observe whether they are new, good used, poor used, or worthless, and note same on memorandum. The percentage of each must be reported. The word "approximate" should not be used. To determine condition, examine the entire lot except when in a public cold storage house.

B. Definitions of cases

- 1. A new case is one which has not been previously used and which meets the minimum requirements of the R. R. classification.
- 2. A good used wood case is one which is reasonably clean, is not "weather beaten" (browned) or badly stained:



It shall have sufficient rigidity, meaning the sides and bottoms are nailed to the ends and center securely and have full cleats and center. The case shall be nailed securely, meaning 21 nails in each bottom, 7 in each nailing edge; 18 in each side, 6 in each nailing edge; and 8 or more nails in the top; none in the center except when specifically instructed. Nails should hold firmly and not be loosened by wear or holding in storage. Bottoms, sides, and ends should not be patched other than an entire new side, or bottom, or if more than one piece construction, the replacement piece shall be of standard size and shape.

The case shall have a full top, which means that the entire top is covered. Top may be of more than one piece, but not more than three, if such pieces are of standard size and shape.

A good used fiberboard case shall be reasonably clean, bright and free from excessive stains.

It shall have sufficient rigidity meaning that no case which has lost its original shape due to warping, bulging, sagging, or indentation can be considered as good used. All seams must be securely fastened with no broken stitches or pulled staples. Hand slots or any other part of the case may not be torn. Any fiber case which is wet or shows evidence of having been wet or excessively damp (such as having been held in storage as evidenced by stains or sagging) shall be considered as poor used. In general, a good used fiber egg case must have the appearance of a "once used" case.

Covers shall be either locked automatically over the ends or in the center, or be fastened by taping. When covers on used cases are not automatically locked or are not taped, cases shall be considered poor used.

3. A poor used case is one which fails to meet the definitions of new or good used but is capable of transporting or holding eggs after minor repairs, such as adding nails to a side or bottom. It may be "weather beaten", stained, dirty, or patched. If of fiberboard construction, it may be warped or sagging. It may have hand slots pulled out and show evidence of having been wet.

4. A worthless case is one which requires extensive repairs, or has a side, center, or end missing, or is covered with mold growth, or is impregnated with undesirable foreign odors, such as oil or kerosene. If of fiberboard construction, it is considered worthless when crushed or badly torn.

5. Citrus fruit boxes are not considered egg cases.



- C. Packing material - observe the condition of the packing material and record the findings on the following basis: new, good used, poor used, or worthless. This observation should be made at time of weighing and grading.

Note:

1. New flats and fillers shall be clean and should show no evidence of previous use.
2. Good used fillers and flats should be reasonably clean and should be sound enough to enable grader to lift the three dozen from the case without losing eggs from broken fillers or torn flats. No mold permitted.
3. Poor used fillers and flats should be used to describe packing material ~~not conforming~~ to new or good used, but capable of transporting eggs. No mold permitted.
4. Worthless fillers and flats are badly torn, very dirty, extremely weak.
5. Newspapers are not considered flats.

IV. Temperatures

- A. The temperature of the holding room or car shall be obtained and note on the memorandum and certificate. Knowing the approximate temperature of the eggs at time of grading is important to enable a grader to grade properly, and noting these temperature figures (holding room and egg) protects the grader in the event the lot may be off grade when checked at a later date. If eggs are held in non-refrigerated room, this, as well as the temperature, must be noted on the certificate.
- B. It is also desirable to note on the certificate, the temperature of the eggs in addition to the holding room temperature, whenever the eggs are warmer than 55°F. This temperature should be obtained from a minimum of three cases in each lot. Since it is necessary to remove the lid to enable placing the thermometer in the center of the case, it is suggested that the temperature be obtained from the sample cases. The thermometer should be inserted between the center portion and the fillers

V. The Drawing of Sample

- A. In a public warehouse, the sample may be drawn by employees of the warehouse. Graders should point out to warehouse employees that sample should be selected from various parts of the lot.
- B. In the dealer's store, the sample must be selected by the grader. Samples should be numbered and initialed by the grader in such a manner that if one or more cases show definitely poorer quality, additional samples can be drawn from the same general part of pile before final grade is given. Samples must be drawn proportionately from various parts of the lot. A representative sample cannot be drawn, nor can each case be stamped unless the one end of each case is accessible. Cases, therefore, should be stacked in such manner as to make them readily accessible to the grader.

- C. In a 600 case railroad car, it is necessary to remove 100 to 150 cases to do a satisfactory job. When these are removed, the samples should be drawn from various parts of the remainder of the car. A portion of the sample should also be drawn from the cases removed. In a 400 or 480 case car, one sample should be drawn out of each row and each layer, up to the total number of cases desired.

## VI. Size of Sample

- A. The following schedule is the minimum of samples to be drawn from the lots of the size indicated:

When size of lot is: Minimum samples drawn shall be not less than:

2 cases.....	2 cases
3 " to 15 cases.....	3 "
16 " to 25 " .....	4 "
26 " to 50 " .....	5 "
51 " to 100 " .....	7 "
101 " to 200 " .....	10 "
201 " to 350 " .....	12 "
351 " to 500 " .....	15 "
500 " to 600 " .....	15 on Wholesale, 20 on Consumer and Procurement

Each additional 100 or fraction thereof.... 3 cases

- B. Whenever a grader is located in an area where the Quartermaster Market Center demands that 5 per cent of the lot shall be inspected, it will be necessary to do so on product sold through the QMCC.

## VII. Grading

- A. The cases should be placed directly under the candling light so that sufficient light will shine into the end of the case being examined, to properly observe shell condition and packing material. 100 eggs should be examined out of each case. The following system shall be used in selecting the 100 eggs for examination.

Examine the 3 top fillers in the 1st case except 8 eggs in 3rd filler  
 The 2nd, 3rd and 4th fillers in the 2nd case " " " 4th " "  
 The 3rd, 4th and 5th " " " 3rd " " " 5th "  
 The 1st, 2nd and 5th " " " 4th " " " 5th "  
 The 1st, 4th and 5th " " " 5th " " " 5th "



This order shall be repeated until all the cases are examined. By examining 100 eggs you will have eight surplus eggs in each third filler examined. The number ungraded should be left in the same corner of the flat each time. This is desired to eliminate any possible argument as to whether dirty eggs or chex in the third filler are to be accepted for grading as part of the sample, or are purposely not graded.

B. When the filler is removed, the grader shall

1. Note the condition of the packing material.
2. Note the number of eggs that are packed, small end up. Where average percentage exceeds 5%, notation of such fact should be shown under remarks on the grading certificate.
3. Select the dirties for grading.

In examining the eggs, the majority of graders note the quality factors almost simultaneously. However, numerous graders note the factors in the following order: dirt, aircell, yolk position, internal foreign particles, yolk movement, blemishes, soundness of shell, and last, the size of the eggs.

- C. As each handful of eggs are graded, the eggs of each grade shall be placed in separate fillers or if the lot of eggs is uniform, the tolerance may be placed in one filler properly segregated as to grade.
- D. Upon completion of the grading of each 100 eggs, the findings should be recorded on the memorandum as to external and internal qualities. Be sure to check your figures to make certain the figures recorded total 100. After this recording is made, graders should record the number of eggs per 100, which fall below the required individual egg minimum weight.

E. Egg description

1. Fresh or storage as reported by applicant. A comment should be placed under remarks if grader's opinion differs from applicant's statement.
2. A statement as to whether natural or shell treated is necessary.
3. Color - state whether Whites, Browns, or mixed.
4. Description of loss is desirable. Descriptions must be limited to those listed in the Individual Egg Standards.

F. Proceed with balance of grading.

G. Averaging results

1. Total each column, that is: Total weight, percentages of A, B, etc., per cent eggs under weight.
2. Cross total the percent A, B, etc. Do not add the number of eggs "under weight" in the cross total. This figure shall equal 100 times the number cases examined.
3. Average the weight - percentages A, B, etc., and per cent eggs "under weight".



### VIII. Weighing

- A. The net weight should be obtained by weighing all the fillers, flats, and eggs from the end of the case which was examined. Multiply the weight obtained by two and subtract 3-1/2 lbs. The resultant figure is the net weight of the eggs in the case. If the grader has 20 or more sets of fillers and flats available for weighing, he may determine his own tare. Gross and tare shall be figured in 1/4 lb. The scale must at all times be read by the grader personally.
- B. At the time of weighing, observe the condition of the packing material and record the findings on the following basis: new, good used, poor used, worthless. - See paragraph III for definitions.
- C. It is desirable to examine each half case graded to determine presence of any undesirable odors, and report on grading certificate. If a definite undesirable odor is present, place lot in U. S. No Grade. (See item 34 in the Individual Egg Standards).

### IX. Assigning Grade

- A. The grade assigned to any lot shall be the highest grade that can be given. The grade assigned should reflect a true picture of the lot, based on the findings of the inspection.
- B. The three grade classifications are graduated in the following order: Consumer, highest, followed by Procurement, and last Wholesale. These grade classifications may be further graduated by considering Consumer A, and Procurement I equal; and considering Procurement II, III, and IV better than Consumer B.
- C. To place a lot of eggs into a Consumer A or Procurement classification, each individual case shall contain within 20 per cent of the required percentage of A's for the grade assigned. Eg., to enable a lot to be placed in U. S. Grade A, each individual case must contain a minimum of 60% A's and the lot must average not less than 80% A's. To enable a lot to be placed in a Procurement II, each case must contain a minimum of 40% A's. When a lot of eggs averages more than 80% A's but has individual cases containing less than 60% A's it cannot be placed higher than Procurement II.
- D. To assign the grade, total and average the figures obtained in the inspection. Second, note whether the lot contains any loss or leakers, if it does, it can only be considered as a wholesale classification. If no loss or leakers are present, place the lot in a consumer or procurement grade, whichever is the highest, based on the graduation indicated above.
- Cl. To place a lot of eggs into consumer AA, B, or C classification, each individual case shall contain within 20 per cent of the required percentage of AA's, B or C respectively.

- E. If the average per cent of AA's is 80% it may be considered for Grade AA Consumer classification. If the average per cent of AA or A's combined total 80%, it may be considered for Grade A Consumer classification or Procurement I. If the average per cent of AA and A's combined total 60 - 40 or 20%, the lot may be considered for Procurement II, III or IV respectively. If the average per cent of Grade AA, A and B's combined total 80%, the lot may be considered for B Consumer classification. If it fails to meet these minimum requirements, it can only be considered for Grade C Consumer classification, or one of the Wholesale grades.
- F. Place the lot into the highest grade for which it may be considered provided the percentage of undergrade eggs does not exceed the permitted tolerance. If the percentage of under grades exceeds the tolerance, it is necessary to lower the grade assigned to the highest grade in which the percentage of under grades does not exceed the tolerance.
- G. After a lot has been classified on a quality basis, it is also necessary to assign a weight classification based on the weight classification for the appropriate Tentative U. S. Weight classes for shell eggs. The weight classification of Procurement grades is based on the contract under which the lot is sold.
- H. Consumer and Procurement grades shall have a uniform appearance as to size.
  - 1. In Consumer grade, there is no tolerance for eggs below the weight required. However, an administrative tolerance of not more than 3.3% (lot average) may be allowed for individual eggs in the next lower weight classification below the minimum specified.
  - 2. In Procurement grade, not more than 3.3% (lot average) of the individual eggs may fall into the next lower weight classification.
  - 3. In Wholesale grade, not more than 10% (lot average) of the individual eggs may fall into the next lower weight classification.
- I. A lot of eggs is assigned a Wholesale grade whenever the lot fails to meet the quality requirements of a Consumer or Procurement classification, or contains loss, leakers, an excessive amount of dirties, or chex.
- J. Since loss is a factor which cannot be compensated, the first step in assigning a grade is to compare the loss on the memorandum with the chart for Wholesale grades. Next, compare the percentage of top grade eggs with the required minimum percentage. The lot is placed tentatively into the highest grade permitted, based on the percentage of top grade eggs, provided the loss is not excessive. If the loss is excessive, the grade assigned must necessarily be lowered to agree with the loss in such lower grade. The third item in the determination of the correct Wholesale grade is the amount of under grades or tolerance.



If the combined total of tolerance and loss in the lot in question does not exceed the amount allowed in the Wholesale chart, the grade assigned remains unchanged. If the total exceeds the tolerance and loss on the chart, the grade must be lowered to a grade so that the total loss and tolerance does not exceed the amount permitted for the lower grade. In no instance may the loss in the lot in question exceed the loss indicated on the chart for the final grade assigned.

- K. No individual case may weigh less than the required minimum weight, as indicated in the chart for Consumer, Wholesale, or in the case of Procurement as stated in the contract. Whenever an individual case weighs within one pound below the required minimum individual case weight as determined by weighing 1/2 case, it is required that both ends be weighed.
- L. When a Procurement grade is assigned. The results shall also be checked as to whether it meets the Army requirements. If the lot fails to meet Army requirements, the following statement shall appear on the certificate directly beneath the grade "This lot does not meet Army requirements because of \_\_\_\_\_".
- M. Each lot must be placed in a specific grade. Do not use the term "Except for".
- N. When lot contains more than 5% loss, place the following term on certificate "No U. S. Grade."

X. Identifying the Lot with the Official Grade Stamp

THE LOT NUMBER MUST BE THE ENTIRE COVERING CERTIFICATE NUMBER.

- A. When examined in a railroad car on Team Track:
  - 1. If a Consumer or Procurement Classification, double stamp the sample cases on the end examined with U.S.D.A. lot and grade.
  - 2. When of a Wholesale classification, double stamp the sample cases with U.S.D.A. lot number.
  - 3. ATTACH COPY OF WORK SHEET TO CAR DOOR WHENEVER EACH CASE NOT STAMPED.
- B. When examined in public warehouse and each case is stamped or tagged with a storage lot number:
  - 1. Same as A, sub 1 and 2 above.
- C. When examined by a resident grader:
  - 1. If of a Consumer or Procurement classification, single stamp all cases in the lot with grade and lot number (grade and lot stamp may be combined). Double stamp the end of the cases examined.
  - 2. If of a Wholesale grade, stamp all cases only with U.S.D.A. lot number. If a Wholesale grade stamp is available indicating exact grade and size classification indicate exact grade and size classification. Double stamp the end of the case examined.

D. When examined by fee grader in a dealer's store or on private siding

1. Stamp as C above, sub 1 and 2.

E. Eggs sold under purchase announcement should be stamped in accordance with special instructions issued under such announcement. If you are not certain of terms of announcement, request dealer to allow you to see his copy for reference.

#### XI. Preparation of Memorandum

A. The official egg grader's memorandum shall be executed in detail at time of grading. All grading certificates shall be "backed up" with a detailed memorandum which shall be kept on file. Memorandum must be signed in ink or indelible pencil.

XII. A separate certificate shall be issued for each lot of 100 cases or larger. More than one small lot may be shown on one certificate, provided they do not total more than 100 cases, and, provided the applicant and seller are the same on all sub-lots. This does not apply to work in connection with certificate of quality. Grading detail for each case graded shall be typed on the certificate whether the lot is one or 600 cases, except when inspection covers product delivered on a "contract" or "summary certificate".

#### XIII. Sample Gradings

When a dealer specifically requests the size of the sample be limited to 5 or 10 cases per car lot, it is mandatory that the grade be qualified by typing just above the grade the words "Sample Grading".

EG.           SAMPLE GRADING  
              U.S. No. 1 Extras Wholesale Grade

#### XIV. Shortages

Should you encounter "shortage" in any half of case for grading, report the number of eggs short on the memorandum, but do not include such shortage in computing the grade. To arrive at the weight of such case, weigh the other half. If both halves are short then replace with another case for weighing and grading.

#### XV. Sealing Egg Cases

Fiberboard cases should be sealed with one or more strips of gummed tape. The strips shall be so placed that they must be torn to enable the case to be opened. The tapes shall be stamped on each end of the strip in such a manner that part of the stamp impression is on the tape, and part on the case.

Wooden cases should be sealed by placing one strip of paper two inches in width completely around each 15 dozen of eggs. The tape shall be drawn tight so as to fit snugly around the fillers and flats. The tapes shall be glued together for a distance of not less than approximately four inches and shall be stamped in such a manner that part of the stamp impression is on each end of the tape.



XVI. Examples of Correct Grade Terminology

Consumer . . . .U.S. A Grade large  
Procurement. .U.S. Procurement 1  
Wholesale. . .U.S. No 1 Extras large wholesale grade

XVII. Condition Inspection of Shell Eggs to Determine Railroad or Truck Damage

The following information is desired when making condition inspection of shell eggs:

1. Number of cases badly damaged.
2. Percentage of loss in badly damaged cases.
3. Number of leakers and dented checks in top fillers of each end of 20 undamaged cases to determine concealed damage. To be reported separately for each case.
4. General condition of cases and packing material. State whether case fiber or wood.
5. A properly qualified statement reporting the shift, if any, and type of bracing used. If this information is not obtained first hand, it is necessary to state from whom information was obtained.
6. Number of frozen eggs, if any.
7. Amount of ice in car. State in terms of full, half, quarter, etc.
8. Accompany certificate with recommendation for rehandling or disposition if applicant is a Federal agency.
9. Any other comments which aid in describing the condition of the eggs and packaging material. No grading report is required, unless specifically requested. However, a covering certificate giving the above information shall be issued.

*B. W. Kempers*

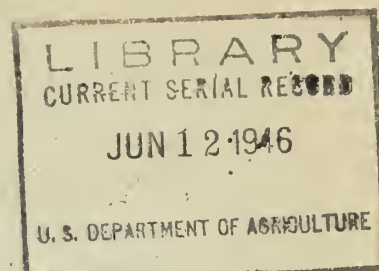
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U. S. DEPARTMENT OF AGRICULTURE  
Production and Marketing Administration  
Washington 25, D. C.



January 1, 1945

February 6, 1946 (slight revision)

To: Egg Graders

From: B. W. Kemmers, Inspection and Grading Division, Dairy and Poultry Branch

Subject: Mechanics of Shell Egg Grading

# I. REQUIRED FACILITIES

- A. A dark inspection or candling room with no cross beams of light between the grader and the candling light. By "dark" is meant a room darkened to the extent that a person entering the room from bright daylight would be temporarily blinded. The cross beams of light to be avoided are those which are due to improperly closed curtains, windows, cracks in the partitions, or unshielded candling or nailing bench lights.
- B. A candling light of approved construction:
  1. If a non-reflector type is used, use a 40 to 60 watt bulb.
  2. If a reflector of the auto head type is used, use a bulb of no greater than 10 Wattage and no greater than 25 Watts if household type bulb.
  3. The opening to which the egg is placed for examination should be no larger than a 25¢ piece.
  4. The opening at the bottom of the light should be no larger than necessary to permit sufficient light to escape to enable the detecting of dirty eggs, and the observation of packing material.
  5. The lights should be adjusted so that the candling light is approximately on the same level as the grader's elbows.
  6. The interior of candling lights should be kept clear and free from dust to assure maximum light efficiency.
- C. An individual egg scale capable of being balanced and checked for accuracy at the time of grading. The scales are to be kept in a level position when in use.

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D. A Platform or spring scale graduated in 1/4 lb. or less graduations

1. Balance the scales prior to each inspection or grading
2. It is preferred that each grader carry his own scale and weighing basket.

E. A supply of official memoranda

F. An official grade and lot stamp

## II. THE IDENTIFICATION AND COUNTING OF CASES IN LOT PRIOR TO GRADING

- A. Record the marks and identifications which are on the cases on the memorandum. The marks to be noted are:
  1. Lot numbers (USDA, storage, or firm)
  2. Brand
  3. Name and address of packer or distributor
  4. Any other marks relating to contents of eggs
- B. Food and Drug Administration's requirements as to marking must be met or no grading shall be made, except when product will not be delivered to a Federal agency or will not be shipped across State lines. These requirements are description of contents (such as 30 dozen shell eggs) and name and address of packer or distributor. Old labels and markings should be properly defaced.
- C. Counting the cases - Count the cases in the lot prior to drawing the sample except when eggs are stored in a public warehouse. Note the total number of cases on the memorandum. Verify the count at the time the cases are stamped with the grade or lot number.

## III. CASES AND PACKING MATERIAL.

- A. Cases - Examine the cases and note on your memorandum whether they are wood, fiberboard, or both (if both, show the actual number of each). Also observe whether they are in a new, good used, poor used, or worthless condition. Record the condition of the cases on your memorandum. If the lot consists of more than one quality of cases, record the percentage or actual number of each quality. Do not use the word "approximate." To determine the condition of the cases in a lot, examine the entire lot except when in a public cold storage house. If the warehouse sample indicates quality of cases is variable, qualify your certificate indicating condition statement of cases is based on sample only.



B. Definitions of cases

1. A new case is one which has not been previously used and which meets the minimum requirements of the R. R. classification.
2. A good used wood case is one which is reasonably clean, is not "weather beaten" (browned) or badly stained and free of visible mold.

It shall have sufficient rigidity, meaning the sides and bottoms are nailed to the ends and center securely and have full cleats and center. The case shall be nailed securely, meaning 21 nails in each bottom, 7 in each nailing edge; 18 in each side, 6 in each nailing edge; and 8 or more nails in the top, none in the center except when specifically instructed. Nails should hold firmly and not be loosened by wear or holding in storage. Bottoms, sides, and ends should not be patched other than an entire new side, or bottom, or if more than one piece construction, the replacement piece shall be of standard size and shape.

The case shall have a full top, which means that the entire top is covered. Top may be of more than one piece, but not more than three, if such pieces are of standard size and shape.

A good used fiberboard case shall be reasonably clean, bright and free from excessive stains.

It shall have sufficient rigidity meaning that no case which has lost its original shape due to warping, bulging, sagging, or indentation can be considered as good used. All seams must be securely fastened with no broken stitches or pulled staples. Hand slots or any other part of the case may not be torn. Any fiber case which is wet or shows evidence of having been wet or excessively damp (such as having been held in storage as evidenced by stains or sagging) shall be considered as poor used. In general, a good used fiber egg case must have the appearance of a "once used" case.

Covers shall be either locked automatically over the ends or in the center, or be fastened by taping. When covers on used cases are not automatically locked or are not taped, cases shall be considered poor used.

3. A poor used case is one which fails to meet the definitions of new or good used but is capable of transporting or holding eggs after minor repairs, such as adding nails to a side or bottom. It may be "weather beaten," stained, dirty, or patched but shall be free of visible mold. If of fiberboard construction, it may be warped or sagging. It may have hand slots pulled out and show evidence of having been wet.

4. A worthless case is one which requires extensive repairs, or has a side, center, or end missing, or is covered with mold growth, or is impregnated with undesirable foreign odors, such as oil or kerosene. Of fiberboard construction, it is considered worthless when crushed or badly torn.

5. Citrus fruit boxes are not considered egg cases.

C. Packaging material - Observe condition of the packaging material and record your findings on the following basis: new, good used, poor used, or worthless. Make this observation at time you test weigh and grade the eggs.

Definition of fillers and flats:

1. New flats and fillers are clean and show no evidence of previous use.
2. Good used fillers and flats are reasonably clean to clean and are sound enough to enable grader to lift the three dozen from the case without losing eggs from broken fillers or torn flats. No mold is permitted.
3. Poor used fillers and flats describes packaging material not conforming to new or good used, but capable of transporting eggs. No mold is permitted.
4. Worthless fillers and flats are badly torn, very dirty, extremely weak and may show evidence of mold.
5. Newspapers are not considered flats.

#### IV. TEMPERATURES

A. Record the temperature of the holding room or car on the memorandum and certificate. Knowing the approximate temperature of the eggs at time of grading is important to enable a grader to grade properly, and noting these temperature figures (holding room and egg) protects the grader in the event the lot may be off grade when checked at a later date. Note on the certificate if eggs are held in non-refrigerated room as well as the temperature of the room.

B. It is also desirable to note on the certificate the temperature of the eggs in addition to the holding room temperature whenever the eggs are warmer than 55°F. Obtain this temperature from a minimum of three cases in each lot. Since it is necessary to remove the lid to enable placing the thermometer in the center of the case, it is suggested that the temperature be obtained from the sample cases. Insert the thermometer between the center partition and the fillers.

## V. THE DRAWING OF SAMPLE

- A. In a public warehouse, the sample may be drawn by employees of the warehouse. Graders should point out to warehouse employees that the sample is to be selected from various parts of the lot, including some from inside the stock.
- B. In the dealer's store, the sample must be selected by the grader. Number and initial each sample case in such a manner that if one or more cases show definitely poorer quality, additional samples can be drawn from the same general part of the stock before the final grade is determined. Draw the samples proportionately from various parts of the lot. This is particularly important if the lot was accumulated over a period of two or more days or is a lot of storage eggs. SRA 137 requires that the lot be accessible for grading, or a grading may be refused. No representative sample can be drawn nor can each case be stamped unless one end of each case is accessible. The applicant may assist in the physical drawing of the sample but such work is to be done under the direct supervision of the grader.
- C. In a 600 case railroad car, it is necessary to remove 100 to 150 cases to do a satisfactory job. When these are removed, draw the samples from various parts of the remainder of the car. A portion of the sample should also be drawn from the cases removed. In a 400 or 480 case car, draw one sample out of each row and each layer, up to the total number of cases desired. The sample must be drawn by the grader.
- D. Split lots - When a lot of product has been divided into two or more lots and only one of the lots is accessible, at the time of grading, the grading certificate may only cover that part lot from which the grader drew his sample. If samples are drawn by anyone except the grader, the grading certificate shall cover only the sample not the lot from which it was supposed to have been drawn.

## VI. SIZE OF SAMPLE

- A. The following schedule is the minimum number of samples to be drawn from the lots of the size indicated:

<u>When size of lot is:</u>		<u>Minimum samples drawn shall be not less than:</u>
2 cases.....		2 cases
3 " to 15 cases.....		3 "
16 " to 25 " .....		4 "
26 " to 50 " .....		5 "
51 " to 100 " .....		7 "
101 " to 200 " .....		10 "
201 " to 350 " .....		12 "
351 " to 500 " .....		15 "
500 " to 600 " .....		15 on Wholesale, 20 on Consumer and Procurement

Each additional 100 or fraction thereof 3 cases

- B. Whenever a grader is located in an area where the Quartermaster Market Center demands that 5 per cent of the lot be inspected, it will be necessary to do so on product sold through the QMMC.

## VII. GRADING

### A. Placement of Case

The case to be graded should be placed directly under the candling light so that sufficient light will shine into the end of the case being examined to observe shell condition and packaging material properly.

### B. Amount and order of examination

Examine 100 eggs out of each case using the following system in selecting the 100 eggs:

Examine the 3 top fillers in the 1st case except 8 eggs in 3rd filler  
 The 2nd, 3rd and 4th fillers in the 2nd case " " " " 4th "  
 The 3rd, 4th and 5th " " " 3rd " " " " 5th "  
 The 1st, 2nd and 5th " " " 4th " " " " 5th "  
 The 1st, 4th and 5th " " " 5th " " " " 5th "

The 8 surplus eggs in the 3rd filler examined in each case are to be left in the same corner of each filler to eliminate any possible argument as to whether dirty eggs or checks in the 3rd filler are to be accepted for grading as part of the sample or are purposely not graded. Repeat the above order of examination for all sample cases in excess of 5.



C. Facts to be noted continuously:

1. The newness and cleanliness of each filler and flat as you remove them from the case.
2. The number of eggs that are packed small end up. Whenever the average percentage of eggs packed small end up exceeds 5%, make a notation to this effect under remarks on the grading certificate.
3. The presence and degree of dirties by examining each handful of eggs with direct light. By direct light is meant the light which escapes from the bottom of the candling light not the light which is reflected from the back of the light and escapes through the opening to which the egg is placed for examination. All eggs appearing dirty when the filler is removed are to be candled first.

D. Segregation of Eggs While Grading

As each handful of eggs is graded, place the eggs of each grade in separate fillers or if the lot of eggs is uniform, the tolerance may be placed in one filler properly segregated as to grade. In addition to segregating the eggs as to quality, you are also to segregate the eggs as to size. Grade all eggs first on a quality basis and then place the undersized eggs in a separate filler or part of the filler properly segregated as to quality.

E. Completion of Memo

1. State whether eggs are fresh or storage as reported by applicant. A comment should be placed under remarks if grader's opinion differs from the applicant's statement.
2. State whether eggs were natural or shell treated.
3. State the color--white, brown or mixed or the number of cases of each if applicant can furnish such information.
4. Describe the loss, limiting the terms used to those listed in the Individual Egg standards.

F. Averaging Results

1. Total and average each column vertically. That is total all the net weights, all the A's, etc.
2. Check your work by adding the average of all quality factors. These are AA, A, B, C, LD, D, checks, loss. The quality factors should total 100 times the number of cases examined and their averages should total 100.

G. Grading Eggs Intended for Small Contracts

- When eggs are graded for small contracts, such as city institutions or veterans' hospitals, examine the amount required under Section VI in the manner described in Section VII, paragraphs A to F. In addition, examine a few handfuls of eggs out of the balance of cases in the lot.

H. Irregular Lots

1. The quality of a lot is determined on the basis of the total sample selected. Do not accept a part lot on the basis of candler's identification, individual sublots, or any other subidentification.
2. It is an applicant's privilege to rework the lot either by removing the eggs candled by certain candlers, by individual case inspection, by recandling, or by eliminating certain sublots. When an applicant changes the character of a lot in this manner, a new sample (second) may be selected and a grading made of the "new" lot. Two certificates are to be issued whenever a second sample is selected.

VIII. WEIGHING

- A. Weighing is part of grading - The assigning of a size class to eggs is part of the service automatically requested by the applicant. It is therefore necessary to determine the average net weight on all lots of eggs graded as well as the weight of individual eggs below the minimum weight required for the size class for which the lot of eggs appears to have been packed.
- B. The net weight should be obtained by weighing all the fillers, flats and eggs from the end of the case which was examined. Multiply the weight obtained by two and subtract 3 1/2 lbs. The resultant figure is the net weight of the eggs in the case. If the grader has 20 or more sets of fillers and flats available for weighing, he may determine his own tare. Gross and tare shall be figured in graduations of 1/4 lb. The scale must at all times be read by the grader personally. See page 11, paragraph 3.

- C. When gradings are made on lots of eggs offered to fill institutional contracts and the detail of the grading is shown only on the memorandum and not on the certificate, the grader may, when he is certain that the eggs are sufficiently heavy to meet the contract specifications, omit the actual sealing of the cases. Lack of uniformity in size is cause to reject eggs on institutional contract deliveries when contract specifies a definite size.
- D. At the time of weighing, observe the condition of the packing material and record the findings on the following basis: new, good used, poor used, worthless. See paragraph III for definitions.
- E. It is desirable to examine each half case graded to determine the presence of any undesirable odors. If a definite undesirable odor is present, place the lot into U. S. No. Grade. (See item 34 in the Individual Egg Standards).

#### IX. ASSIGNING GRADE

##### A. General

- 1. The grade assigned to any lot shall be the highest grade that can be given. If the inspection results shows extreme variation indicating the lot was not graded, no official grade need be assigned.
- 2. For the purpose of assigning a grade, the U. S. grades are graduated in the following order as to quality:

U. S. Grade AA (Consumer)  
U. S. Grade A (Consumer)  
U. S. Procurement I, II, III, IV  
U. S. Grade B (Consumer)  
U. S. Grade C (Consumer)  
U. S. Wholesale Grades

- 3. To place a lot of eggs into a consumer classification, each 15- or 30-dozen case shall contain 80% of the quality (or better) of the grade assigned: e.g., each case in a lot of U. S. Grade AA shall contain 80% AA's; each case in a lot of U. S. Grade B shall contain a combined total of 80% of AA's, A's, and B's. If a lot of eggs averages 80% A's but has individual cases containing less than 80% A's, it shall be assigned a grade no higher than a Procurement classification.



4. To place a lot of eggs into a Procurement classification, each lot shall average the required percentage of A's for the grade assigned; however, individual cases may vary up to 20% below the required average, e. g., to enable a lot to be placed in U. S. Procurement II each individual case must contain a minimum of 40% A's with a lot average of 60% A's. When a lot of eggs averages 60% A's or more but has individual cases containing less than 40% A's, it cannot be placed higher than Procurement III.
5. When a Procurement grade is assigned, the results shall also be checked as to whether it meets the Army requirements. If the lot fails to meet Army requirements, the following statement shall appear on the certificate directly beneath the grade "This lot does not meet Army requirements because of \_\_\_\_\_."
6. Each lot must be placed in a specific grade. Do not use the term "Except for."
7. When a lot contains more than 5% loss, place the following term on the certificate: "No U. S. Grade."

B. Mechanics of Assigning Grade

1. The first step in determining the grade is to total and average the figures obtained in the inspection. Second, note whether the lot contains any loss or leakers. If it does, it can only be considered as of a Wholesale classification. If no loss or leakers are present, the lot may be considered for a Procurement or Consumer classification.
2. If each individual case contains 80% AA's, it may be considered for Grade AA Consumer classification. If each individual case contains 80% AA's and A's combined, it may be considered for Grade A Consumer classification. If a lot of eggs averages 80% AA's and A's combined but contains individual cases with less than 80%, the lot can only be considered for a Procurement classification. If the average percentage of AA's and A's combined total 60 - 40 or 20%, the lot may be considered for Procurement II, III or IV respectively provided no individual case contains less A's than 40% A's, 20% A's or 80% B's respectively. If the average percent of Grade AA, A and B's combined totals 80%, the lot may be considered for B Consumer classification. If it fails to meet these minimum requirements, it can only be considered for Grade C Consumer classification or one of the Wholesale grades.
3. Place the lot into the highest grade for which it may be considered provided the percentage of undergrade eggs does not exceed the permitted tolerance. If the percentage of undergrades exceeds the tolerance, it is necessary to lower the grade assigned to the highest grade in which the percentage of undergrades does not exceed the tolerance.

C. Assigning Weight Class

1. After a lot has been classified on a quality basis, it is also necessary to assign a weight classification based on the weight classification for the appropriate Tentative U. S. Weight classes for shell eggs. The weight classification of Procurement grades is based on the contract under which the lot is sold.
2. Consumer and Procurement grades shall have a uniform appearance as to size.
  - a. In Consumer grade, there is no tolerance for individual eggs below the weight required. However, an administrative tolerance of not more than 3.3% (lot average) may be allowed for individual eggs in the next lower weight classification below the minimum specified.
  - b. In Procurement grade, not more than 3.3% (lot average) of the individual eggs may fall into the next lower weight classification.
  - c. In Wholesale grade, not more than 10% (lot average) of the individual eggs may fall into the next lower weight classification.
3. No individual case may weigh less than the required minimum weight, as indicated in the chart for Consumer, Wholesale, or in the case of Procurement as stated in the contract. Whenever an individual case weighs within one pound below the required minimum individual case weight as determined by weighing 1/2 case, it is required that both ends be weighed.

D.

D. Assigning a Wholesale Grade

Since loss is a factor which cannot be compensated, the first step in assigning a Wholesale grade is to compare the loss on the memorandum with the chart for Wholesale grades. Next, compare the percentage of top grade eggs with the required minimum percentage. The lot is placed tentatively into the highest grade permitted, based on the percentage of top grade eggs, provided the loss is not excessive. If the loss is excessive, the grade assigned must necessarily be lowered to agree with the loss in such lower grade. The third item in the determination of the correct Wholesale grade is the amount of under-grades or tolerance. If the combined total of tolerance and loss in the lot in question does not exceed the amount allowed in the Wholesale chart, the grade assigned remains unchanged. If the total exceeds the tolerance and loss on the chart, the grade must be lowered to a grade so that the total loss and tolerance does not exceed the amount permitted for the lower grade. In no instance may the loss in the lot in question exceed the loss indicated on the chart for the final grade assigned. The tolerance may be exceeded in an amount equal to the "unused percentage of loss. In other words, we permit the combining of AA's and A's in determining the amount of "top quality" when assigning a Consumer grade A or a Procurement classification. Similarly, we permit the substitution of "unused" loss to be added to the permitted tolerance. We do not permit the substitution of "unused" tolerance to be added to the permitted loss.

X. IDENTIFYING THE LOT WITH THE OFFICIAL GRADE STAMP

THE USDA LOT NUMBER IS ALWAYS THE ENTIRE COVERING CERTIFICATE NUMBER.

A. When examined in a railroad car on Team Track:

1. If a Consumer or Procurement classification, double stamp the sample cases on the end examined with USDA lot and grade.
2. When of a Wholesale classification, double stamp the sample cases with USDA lot number.
3. ATTACH CARBON COPY OF WORK SHEET TO CAR DOOR WHENEVER EACH CASE IS NOT STAMPED.

B. When examined in public warehouse and each case is stamped or tagged with a storage lot number:

1. Same as A, sub 1 and 2 above.



C. When examined by a resident grader:

1. If of a Consumer or Procurement classification, single stamp all cases in the lot with grade and lot number (grade and lot stamp may be combined). Double stamp the end of the cases examined.
2. If of a Wholesale grade, stamp all cases only with USDA lot number. If a Wholesale grade stamp is available indicating exact grade and size classification, indicate exact grade and size classification. Double stamp the end of the case examined.

D. When examined by fee grader in a dealer's store or on private siding.

1. Stamp as C above, sub 1 and 2.

- E. Eggs sold under purchase announcement should be stamped in accordance with special instructions issued under such announcement. If you are not certain of terms of announcement, request dealer to allow you to see his copy for reference.

XI. PREPARATION OF MEMORANDUM

1. Execute the official egg grader's memorandum in detail at the time of grading. All grading certificates shall be "backed up" with a detailed memorandum which shall be kept on file. Initial the memorandum in ink or indelible pencil.

## XII. PREPARATION AND DISTRIBUTION OF CERTIFICATE AND 188'S

- A. Issue a separate certificate for each lot of 100 cases or larger. More than one small lot may be shown on one certificate, provided they do not total more than 100 cases, and, provided the applicant and seller are the same on all sublots. This does not apply to work in connection with grade labeling. Type the grading detail for each case graded on the certificate whether the lot is one or 600 cases, except when inspection covers product delivered on an institutional "contract" or "summary certificate," in which case the grading detail need only be recorded on the memorandum.
- B. General Information Reference Certificates
1. Certificates shall be issued in numerical order.
  2. Certificates should be typed. When not typed, they should be printed in ink.
  3. All copy sheets shall bear the number of the original of which they are copies.
  4. All originals are to be signed in ink and all copies initialed.
  5. When small errors are made on a certificate prior to the release of the certificate, the errors are to be corrected and initialed by the grader.
  6. The original certificate is never to be destroyed. If too many errors are made in executing a certificate the word "void" may be written diagonally across the face of the certificate. Such voided certificates are to be attached to the FDA 188 and listed on same. In such cases no entry is to be made in the weight column. The word void may be typed under the column entitled "applicant." Any minor alteration on a certificate shall be initialed by the grader in ink.
  7. When an error is discovered after the certificate has been released, issue a "corrected certificate." Mark such certificates with the words "Corrected Certificate" above the serial number. In the body of the certificate make the following remark: This is a corrected certificate and supersedes Certificate No. \_\_\_\_\_ issued in error." Distribute the corrected certificate in the same manner as the original. Recall the original and all copies of the certificate issued with errors and forward them as instructed in paragraph 6 above.

8. The number of copies to prepare is dependent upon the request of the applicant. Two copies must be sent to the State Supervisor.

C. Distribution of Certificates

1. Original and as many copies as desired by the applicant.
2. One copy to the State Supervisor's office (to be forwarded each Saturday.
3. One copy, attached in numerical order to the original of FDA 188, to be forwarded monthly to the State Supervisor's office.
4. The official memoranda attached to a copy of FDA 188 are to be forwarded monthly to the State Supervisor's office.

D. Preparation of FDA 188

1. Show all information requested in the heading
  - a. Product "Shell Eggs."
  - b. Month - applicable date such as "July, 1945."
  - c. Office - "City in which State Supervisor is located."
2. List certificates in numerical order, including voided certificates.
3. Show quantity in cases.
4. Staple or clip certificates as stated in "C" above, including voided certificates.
5. Mail promptly at the close of each month.

XIII. PARTIAL GRADING

When a dealer specifically requests the size of the sample to be limited to 5 or 10 cases per car lot, it is mandatory that the grade be qualified by typing just above the grade the words "Partial Grading."

EG.

PARTIAL GRADING

U. S. No. 1 Extras large Wholesale Grade



#### XIV. WASHED EGGS

When a lot of eggs appears to have been washed, place the following phrase under remarks both on your memorandum and on the certificate:

"This lot of eggs appears to have been artificially cleaned."

The purpose of this statement is to protect the service since cleaned eggs generally deteriorate much more rapidly than unwashed eggs.

#### XV. SHORTAGES

Should you encounter "shortage" in any half case you graded, report the number of eggs short on the memorandum, but do not include such shortage in computing the grade. To arrive at the weight of such a case, weigh the other half. If both halves are short, then replace with another case for weighing and grading.

#### XVI. SEALING EGG CASES - Applies only to institutional and grade labeling work

- A. Seal fiberboard cases with one or more strips of gummed tape. Place the strips so that they must be torn to enable the case to be opened. Stamp the tapes with your official stamp or an approved grade label on each end of the strip in such a manner that part of the stamp impression is on the tape and part on the case.
- B. Seal wooden cases by placing one strip of paper two inches in width completely around each 15 dozen of eggs. Draw the tape tight so as to fit snugly around the fillers and flats. Glue the tapes together for a distance of not less than approximately four inches and stamp with your official stamp or an approved grade label in such a manner that part of the stamp impression is on each end of the tape.

#### XVII. EXAMPLES OF CORRECT GRADE TERMINOLOGY

Consumer	.....U. S. A Grade large or U. S. Grade A large
Procurement	.....U. S. Procurement I
Wholesale	.....U. S. No. 1 Extras large wholesale grade

XVIII. CONDITION INSPECTION OF SHELL EGGS TO DETERMINE RAILROAD OR TRUCK DAMAGE

The following information is desired when making condition inspection of shell eggs:

1. Number of cases badly damaged.
2. Percentage of loss in badly damaged cases.
3. Number of leakers and dented checks in top fillers of each end of 20 undamaged cases to determine concealed damage. To be reported separately for each case.
4. General condition of cases and packing material. State whether case fiber or wood.
5. A properly qualified statement reporting the shift, if any, and type of bracing used. If this information is not obtained first hand, it is necessary to state from whom information was obtained.
6. Number of frozen eggs, if any.
7. Amount of ice in car. State in terms of full, half, quarter, etc.
8. Accompany certificate with recommendation for rehandling or disposition if applicant is a Federal agency.
9. Any other comments which aid in describing the condition of the eggs and packaging material. No grading report is required, unless specifically requested. However, a covering certificate giving the above information shall be issued.





SAMPLE COPY OF SUMMARY CERTIFICATE  
UNITED STATES DEPARTMENT OF AGRICULTURE  
WAR FOOD ADMINISTRATION  
OFFICE OF DISTRIBUTION

(Type in Certificate  
Number)

COPY

EGG GRADING CERTIFICATE

This certificate is receivable in all courts of the United States as prima facie evidence of the truth of the statements therein contained  
This certificate does not excuse failure to comply with any of the regulatory laws enforced by the United States Department of Agriculture  
or the Federal Food, Drug and Cosmetic Act

This certificate issued in cooperation with Washington State Department of Agriculture  
PLACE ISSUED Seattle, Wash. DATE Nov. 13 to 18, 1944 HOUR \_\_\_\_\_  
To (Applicant) Piney Brook Egg Co. ADDRESS 000 Elliott Ave., Seattle  
SHIPPER OR SELLER\* \_\_\_\_\_ ADDRESS \_\_\_\_\_  
RECEIVER OR BUYER\* To be sold ADDRESS \_\_\_\_\_

I CERTIFY that in compliance with the regulations of the Secretary of Agriculture governing the grading of eggs, pursuant to the Act making appropriations for the United States Department of Agriculture, I graded at the time, and on the date stated above, the eggs described below, and that the quality and condition of said eggs, at said time and on said date, were as stated below:



FEE \_\_\_\_\_ Contract \_\_\_\_\_  
EXPENSE \_\_\_\_\_  
TOTAL \_\_\_\_\_

Bill Jones Official Grader.  
ADDRESS Seattle, Wash.

FEE BASED ON Contract CAR INITIAL AND NO. \_\_\_\_\_ CAR SEAL No. \_\_\_\_\_

EGG DESCRIPTION fresh processed TOTAL CASES 1720 No. EXAMINED see below

CASE DESCRIPTION AND CONDITION 30 doz. fiber and cartons DESCRIPTION AND TEMPERATURE WHERE EGGS HELD 45° cooler

FILLER DESCRIPTION AND CONDITION New cartons & new or good used WHERE EXAMINED 000 Elliott Ave. Seattle

FLAT DESCRIPTION AND CONDITION Cups WAREHOUSE Lot No. \_\_\_\_\_

PACKAGES WERE STAMPED WITH AA & A grade cartons sealed with certificate of quality

B grade cartons sealed with grade label - Bulk sealed with gummed tape.

~~GENERAL GRADE AND SIZE~~ Cases and tapes stamped with official grade.

Case No.	Net Weight	Percent U. S. Grade AA	Percent U. S. Grade A	Percent U. S. Grade B	Percent U. S. Grade C	Percent U. S. Light Dirties	Percent U. S. Dirties	Percent U. S. Checks	Percent Loss	Percent Shortage	Percent Medium Under 28 Oz.†	Percent Medium Under 22 Oz.†	Percent Small Under 20 Oz.†
1	<u>Cartons</u>						<u>Nov.</u>	<u>13</u>	<u>14</u>	<u>15</u>	<u>16</u>	<u>17</u>	<u>18</u>
2													
3	<u>U.S. Grade AA Extra large</u>							<u>20</u>	<u>10</u>	<u>60</u>	<u>75</u>	<u>60</u>	<u>40</u>
4	<u>U.S. Grade AA Large</u>							<u>5</u>	<u>10</u>	<u>45</u>	<u>65</u>	<u>30</u>	<u>35</u>
5	<u>U.S. Grade A Extra large</u>							<u>20</u>	<u>30</u>	<u>30</u>	<u>45</u>	<u>45</u>	<u>50</u>
6	<u>U.S. Grade A Large</u>							<u>10</u>	<u>5</u>	<u>30</u>	<u>40</u>	<u>40</u>	<u>40</u>
7	<u>U.S. Grade A Medium</u>							<u>5</u>	<u>5</u>	<u>20</u>	<u>30</u>	<u>30</u>	<u>40</u>
8	<u>U.S. Grade B Large</u>							<u>25</u>	<u>5</u>	<u>10</u>	<u>20</u>	<u>10</u>	<u>80</u>
9													
10	<u>Bulk</u>												
11	<u>U.S. Grade AA Extra large</u>							<u>-</u>	<u>-</u>	<u>20</u>	<u>10</u>	<u>-</u>	<u>-</u>
12	<u>U.S. Grade AA Large</u>							<u>-</u>	<u>-</u>	<u>-</u>	<u>10</u>	<u>10</u>	<u>-</u>
13	<u>U.S. Grade A Extra large</u>							<u>30</u>	<u>20</u>	<u>-</u>	<u>10</u>	<u>-</u>	<u>-</u>
14	<u>U.S. Grade A Large</u>							<u>20</u>	<u>20</u>	<u>30</u>	<u>10</u>	<u>-</u>	<u>-</u>
15	<u>U.S. Grade A Medium</u>							<u>-</u>	<u>40</u>	<u>20</u>	<u>10</u>	<u>30</u>	<u>-</u>
16	<u>U.S. Grade B Large</u>							<u>40</u>	<u>40</u>	<u>10</u>	<u>10</u>	<u>80</u>	<u>10</u>
17													
18	<u>U.S. Light Dirties</u>							<u>40</u>	<u>10</u>	<u>-</u>	<u>10</u>	<u>-</u>	<u>30</u>
19													
20													
TOTAL,													
AVERAGE,													

REMARKS:

PLEASE REFER TO THIS CERTIFICATE BY NUMBER AND PLACE ISSUED

Eggs examined continuously throughout the week.

\* As stated by applicant or contractor.

† Eggs reported as medium or small are all reported under the other headings according to their quality.

